

THIS MONTH WE SALUTE
**FLORIDA'S TOP
 TRAFFICMAN**
WA4SCK
 (See Story Below)

SUBSCRIPTION EXPIRES
 THIS ISSUE

FLORIDA SKIP

Vol. 11 No. 11

The All-Florida Radio Amateur's Publication

APRIL 1968

Price 20c

'IJ' Rovang Retired But Always Occupied

WA4SCK

Irving J. Rovang, who early acquired the substitute name "IJ", was born in a little white farm house near the town of Lake Mills, Iowa in 1897. There he learned, at a very tender age, which end of the cow the milk comes from, and just how much hay a cow can eat - all before breakfast. Here he attended grade and part of high school. However, in 1907, when the government moved the Sioux Indians off the Rosebud Reservation in the middle of South Dakota, his entire family, including the cows, horses, machinery, furniture and what not,

took off for the new land, settling on homesteads 25 miles from the nearest town - Fort Pierre. Here he learned many lessons - one of which was never to get bucked off your horse onto a Texas cactus clump, and two, that there were more rattlesnakes, prairie dogs, coyotes and jackrabbits per square mile in Rosebud than any other place on earth. In 1912 however, he

moved back to Lake Mills, completing his high school work, and in 1914, went to work for the M. & St. L. Railroad in

(Continued on Page 9)

Ex-Calls

We have printed hundreds of Ex Calls, and still they keep coming. Have you sent in yours? SKIPPER, Box 501, Miami Springs, Fla. 33166.

W4GJ ex 8CTS 8DPF 8GS

K4HEN ex W1ANC

K4HWF ex 9VP

K4KXP ex 8ZW

W4TY ex 3JU 3EK W2TF

W4OLV ex W8TKH-W9YIM

W4IKB ex KA2LG-W8RTC

W4IOI ex VP5BB

Silent Keys

We are deeply sorry to report the passing of the following Florida amateurs:

Fred Steinberg, W4YSY, Miami, Florida.

H.C. Robinson, W4WSW, St. Augustine, Florida.

Donald F. Simcox, FLORIDA SKIP publisher, Miami Springs, Florida.



THE "GOLD COASTERS" IS AN organization of radio old-timers, many of whom are retired executives of radio, TV and other communications companies. During the "season", bi-weekly luncheons are held, at the "Captain's Table", Deerfield Beach, Florida.

Attending the presentation ceremony, Feb. 26th are five world renowned radio men: l to r: Paul F. Godley, first man to receive amateur wireless signals across the Atlantic; Arthur H. Lynch, W4DKJ; Raymond F. Guy, W4AZ, Secretary, the Gold Coasters, recently elected, President of the Old Old Timers - for which at least 40 years in communications is required for membership- Roland B. Bourne, W1ANA, engineer, author and now Curator of the ARRL Museum, who is taking Lynch's handiwork to Newington, Connecticut, and George Ruos, W4OIY, famous President of the Gold Coasters.

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PERMISSION: Anything in Florida Skip may be reprinted in any other amateur radio publication in the world with a Credit Line please.

Dear Mabel XYL Award, c/o Skip, Box 501, Miami Springs, Fla.

FLORIDA SKIP CORRESPONDENTS

IT'S A FACT. Geo. Hunt, W4NUT
1218 S.W. 21st Ct., Ft. Lauderdale.

"Special OT reporter, Lee R. Scaggliozzi, W4VLN, 1226½ - 15th St. N., St. Petersburg, Fla. 33705."

HINTS & KINKS. R. V. Frederick K4UGC, 460 N. W. 108th Terrace, Miami 33150.

ONYX, MABEL, THE OLD TIMER
c/o Florida Skip, P. O. Box 501, Miami Springs 33166.

Q.C.W.A., Hal Bates, WA4FIU, 86 Ventura Dr., Dunedin, Fla. 33528

VHF - Bertha Eggert, WA4BMC, 1510 - 17th Ave., No., Lake Worth.

Amateur TV. Robert Montgomery K4VFV, 903 Ferndell Rd., Orlando, Fla. 32808

ARMY MARS, Joseph C. Patterson, AD4TZI, Ft. Pierce, Florida

AF MARS, Alan Strauss, WA4JTK, Carol City, Fla.

NAVY MARS, Jim Wilson W4GDK, 1204 Avocado Isle, Ft. Lauderdale, Fla.

VHF SSB'ers R.D. Ralston, K4LFF
7195 59th St., Pinellas Park, Fla. 33565.

2/FLORIDA SKIP April 1968

NETS

FSBA, K4SRI, Holly Hill
FMTN, W4AKB, Miami
FLAMINGO, W4EDP, Miami
QFN, WA4OHO, St. Pete
TPTN, W4SMK, Ft. Myers
FATT, W4ZAG, Tampa

CLUBS

Broward ARC, W4GDK, Ft. Lauderdale
NFARS, K4DSN, Jacksonville
Ft. Myers ARC, W4SMK, Ft. Myers
Gainesville ARS, K4RDP, Gainesville
Orlando ARC, W4BKC, Orlando
HARS W4NQX Tampa
TARC, WA4HDK, Tampa
VERO BEACH ARC, WB4COM, Vero Beach.
Platinum Coast ARS, WN4FVA, Melbourne
GULFSTREAM SOCIETY of A.R.
OPS WB4AID, Lake Worth.
West Palm Beach ARC, John Benjamin, West Palm Beach
Sun Coast VHF, WA4EDL, St. Pete
DADE ARC - W4EDP, Miami
Suncoast Roving and Florida, W4BAV, Sarasota
Indian River ARC, WA4KJV, Rockledge

NOTICE

Due to a space shortage this month, we are unable to print all articles received. Please see QST CQ or front page of last issue for details of FOURTH FLORIDA ANNUAL QSO PARTY. Let's get on the air March 30 and 31st and work the world. Send in logs promptly please.

-Editor



Letters To Editor

Dear Andy,

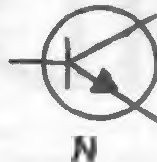
After many months of relative inactivity up here, Ellen and I finally have our things out of storage and more-or-less back on the air. The big rig is out and dipoles are up, but no tower until the landscapers finish pushing dirt around in the back yard.

I had hoped to be assigned to Jack-

sonville after my tour at the Staff College, but BuPers said no—it's Norfolk for you this time. We sure do miss all our old friends down Florida-way.

Keep up your high standards and good work, Andy.

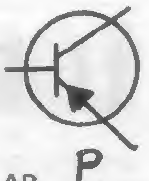
73,
Dick Ackerman, WA4FIJ
665 Coral Key
Virginia Beach, Va. 23452



The Solid State of the Art

by EARL SPENCER, K4FQU*

A continued series dealing with the theory and practices of SOLID STATE or the SEMI-CONDUCTOR TYPES of electronic components.



CHAPTER 3

SEMI-CONDUCTOR MATERIALS IN PARTICULAR

Most electron devices as we know them are dependent upon the free flow of electricity through vacuum or a gaseous state. SEMI-CONDUCTOR devices depend upon the free flow of electrons through a solid material.

Materials most often used in SEMI-CONDUCTORS are GERMANIUM and SILICON although there are many more types under experimentation. Most of these types are being used now as impurity agents in manufacturing processes. GERMANIUM has higher electrical conductivity characteristics than its partner SILICON, because of its lower resistance. GERMANIUM is used in most low power and medium power applications. SILICON, on the other hand, has a far greater temperature co-efficient and there fore is suitable for high power applications where large amounts of heat are generated.

The ability of materials to conduct a current is directly proportional to the number of free electrons it contains, IE: the

(Continued on Page 15)



The FLORIDA SKIP staff is extremely sorry to report the passing of our good friend and SKIP publisher Donald F. Simcox, 43, who passed away quietly in his sleep February 25, 1968. Don truly has been an important factor in the success of FLORIDA SKIP during the past four years. His art work and ad makeup will be hard to replace. Presently his lovely wife, Joan, has agreed to continue with SKIP.

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Hallicrafters	SR-46	Receiver	199.95	145.00
Hallicrafters	MR-150	Mobile Mount	39.95	Offer
Hallicrafter	MR-160	Mobile Mount		Offer
Collins Model	351E-1	Table Mount	24.00	16.00
Swan Mark No.1	1KW	Linear Amplifier	475.00	375.00
National 1KW	NCL-2000	Linear Amplifier	685.00	515.00
Barker-Williams	LP-1	Power Supply	225.00	99.00
Ameco	TX-86	Transmitter	119.95	95.00
Ameco	PS-3	Power Supply	44.95	35.95
Johnson VHF	6N2	6/2M. Transmitter	194.50	125.00
Regency	AR-136	Receiver	99.95	79.50
Clegg Model B	Interceptor		625.00	325.00
Clegg	All bander included with the above			
Clegg	66er	Transceiver	249.95	175.00
Teacraft UHF	TR-20	220 MC Transmitter	65.95	39.00

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Hallicrafter	S-85	Receiver/ S-120 Receiver ea.		39.00
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Heath	HW-32	Transceiver with HP-23 PS		109.00
Johnson Viking	Ranger	Transmitter		85.00
Johnson Viking	KW	Pedestal Transmitter		375.00
National	NC-270	Receiver		99.00
Waters	Codax	Accessory		60.00
C-D	Ham M	Rotator		65.00

Remember - - This is inventory time. We are selling many items too numerous to mention below our cost. All new, some boxes shop worn, some slow movers, some close outs. Don't be shocked, these prices will apply only to present stock and will not be reordered at these prices.

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Meet the 'Country Cousins'

Saturday, March 2nd, found a group of hams, known as the "Country Cousins," and their friends wending their way down to Camp Everglades. This is a camp being developed by the Presbyterian Church, U.S. and assisting is "Cousin" Jim-S4VGE and XYL-Helen Lester. Jim and Helen entertained the "Country Cousins" and friends at a wild boar Bar-B-Q. Some took their families, in trailers, down Friday, making it a week-end trip. Hence, a "big time" started Friday night with a fish fry and a lot of fun, in spite of the cold, windy weather.

After a few hours sleep, W4VGE-Jim, better known as "Jungle Jim" and WA4TBM-Jim Edris, better known as "Terrible Big Mouth" arose at 5 a.m. to start bar-b-queing the wild boars. They were aided by a lot of "chit-chat" as more "Cousins" continued to arrive. Helen and other XYLs were kept busy preparing the delicious tossed salad, baked beans, swamp cabbage, armadillo, coffee and tea.

The Cafeteria Building is built to withstand the highest hurricane winds and can accommodate 350-400, so there was plenty of room for the 75 to 80 persons attending. Speaking on the PA system, Jim expressed regret that several "Country Cousins" could not be with us as planned and then introduced the President "Country Cousin" Ted-WB4CBP, who gave a welcoming speech. Cousin Chester-WA4YRU then gave the invocation; after which the gals were kept busy refilling the dishes. As everyone started losing their appetite, "Jungle Jim" requested that we all join in singing "Happy Birthday" to Cousin Chester-WA4YRU, and as we complied, Cousin Helen appeared with a birthday cake, complete with candles, much to the recipient's surprise. So all had to let their belts out a little more to enjoy a piece of cake. Unfortunately, Cousin Bill "Shipwreck" Budd-W4WDX and XLY-Peg were unable to attend, as it had been expected to give them the "Cousins" best wishes on their 50th wedding anniversary. After assisting in cleaning up, most expressed their appreciation for a wonderful day and headed home. However, a few, who had their trailer, camper, etc. there, spent the remainder of the weekend.

The "Country Cousins" are a group of hams who meet every night at 10 p.m. on 3970 KC. They are not a traffic net, but will handle same in emergency and they help the afflicted. Their motto is "Service and help to all mankind." Officers are: Pres., WB4CBP-Ted Wayne; Vice-Pres. and Net Mgr., W4THO-Joe Gray; 2nd Vice-Pres. and Project Mgr., W4OFH-Ed Hitt; Secretary, Nellie Hitt; and Chaplain, WA4YRU-Chester Plank. They also have a certificate which may be acquired by checking into the Net four times, the same night each week and sending two 6¢ stamps to Cousin Nell.

The "Country Cousins" are somewhat of the "unsung Heros", in that they give aid and help, with no publicity. They do not accept cash donations, as such, but do welcome any radio gear which they use for aiding the afflicted or giving someone in need of such article. If there is compensation for such supplies, the money goes for parts as needed; Cousin Howard-WB4DRM, who is blind, is instrumental in a Comparator being assembled and given to other blind hams to aid in tuning up their transmitters.

Cathy Soehl W4BAV/AREA



WHAT IS IT?? This is the remains of the wooden towers that was part of the antennae system of the old MARCONI Transatlantic located out on the sand dunes at south Wellfleet, Mass. The station was erected around 1908 and this picture was taken by W4FP (Ex-W1CY) in 1934. Note how the sand has eroded (about 10 feet left of the edge.) At the time of this photo, you could drive out to this spot on the "Old Wireless Road" from the "Done road." (Photo by W4FP/W2CY)

New SSB Guide

One-Source Guide to Growing Field of Single Sideband Published.

The lack of channel space in the radio-frequency spectrum means more and more widespread use of ssb. This, coupled with the demand for the lack of highly skilled personnel in the design, construction, installation, and maintenance of ssb, makes this a rapidly growing field.

A new Editors and Engineers book, SINGLE SIDEBAND: THEORY AND PRACTICE, by

Harry D. Hooton, W6TYH, is an essential volume for those interested in this "growth" area of communications.

This middle-level book covers the origin of ssb, the derivation of ssb signals, carrier suppression techniques, sideband selection, carrier generators, speech amplifiers and filters, ssb generators, balanced mixers and converters, low-power ssb transmitters, linear rf power amplifiers, ssb communications receivers, transceivers, tests, and measurements.

This one-source reference emphasizes basic principles and circuitry, rather than mathematics. Where feasible, representative commercial equipment is featured to show how basic theory has been combined with good engineering practice.

The sections on the design, construction, and adjustment of linear amplifiers contain enough information so that any qualified person can build his own equipment. All linear amplifiers shown and described have been tested on the air.

Amplified, the book also includes a foldout section with detailed schematics.

Copies are available from electronics parts distributors and bookstores throughout the country, or from the publisher and Engineers, Ltd., New Augusta, Indiana 46268.

Single Sideband: Theory and Practice, Catalog No. EE-350, Size: 352 pages, 5-1/2 x 8-1/2 inches, hardbound. List Price: \$6.95.



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Races & AREC Meetings, NET Meetings, Prize Drawings,
Floridora Birthday Party, Transmitter Hunt on 145.2 mc,
S.S.B.A. Meeting, Q.C.W.A. Meeting.

SUNDAY, APRIL 28 —

Knights of Kilocycle Breakfast, Forums, Electronic Show,
Prize Drawings, MARS (Army, Air Force & Navy), Races &
AREC Meetings, Floridora Annual Business Meeting.

1:30

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CLUB NEWS

INDIAN RIVER NEWS

M. P. Earnhardt, WN4HNE

The 2 meter transceivers which Jim Bayless, W4BAL, was buying were purchased and they certainly look like they were worth the money.

At our February 26 meeting, a drawing was held for a Musac Multiplex adapter and the winner was KIYXL, Elizabeth Halpine, a visitor from Mass. It certainly was a pleasure to have her and her OM attend our meetings while they were in the area.

This past month our club had a display in the Brevard County Fair held at Wickham Park in Eau Gallie from March 12-17. The display featured QSL's information on how to become an amateur, the ARRL, RACES and many other items. Thanks are in order to all those who contributed to the construction and presentation of the display.

A program on printed circuit board design and techniques will be presented as one of the upcoming programs at our regular meetings, along with code practice and technical sessions provided to increase the knowledge of

those interested in upgrading their licenses. Everyone is invited to participate in the meetings whether they are amateurs or not. The meetings are held at the Today Newspaper Auditorium in Cocoa at 1930 hrs. on the second Monday and fourth Tuesday of each month.

Well, that's it for now from Central Brevard and the Cape area. 73 Mike

GULFSTREAM SOCIETY

by Al Suhr, WB4AID

The meeting of March 2nd was installation of officers at the HDQTRS in Lake Worth of the Gulfstream Society of Amateur Radio Operators. Just to recap, yours truly was made President; Frank Piverotto, SA4TEN, Vice - President; Francis Landy, W4JCM, Secretary; Bob Roderique, WB4AIF, Treasurer; Mel Wrobbel, K4EBZ, Historian; So now everyone is back in the harness - even organized a new Project Committee with Floyd Jones, WA4XS as Chairman; Lewis Elam, W4QJY; John Fertal, WB4IQR and Charles Sjoquist, W4LFB.

Two hams responded to a letter of invitation to become members of the Society. John R. Fertal, WB4-IQR (formerly W8CYQ) is a retired tollmaker. Used to work in the Electronic Department of General Motors.

Our other new member is Charles Sjoquist, W4LFB (formerly W9LCQ) who hails from Chicago and northern Indiana. Formerly with the Ford Motor Co. and now with Pratt-Whitney as an electrician.

Stan Scalise was in town for a few days to attend the funeral of his grandmother. Stan, W4WZZ/5 is now with Texas Instruments in the research division.

Jim Johnson, W4JBZ, Chief Ins-

tractor and helpers, Dick Kidder, WB4AKH with Lew Elam are still holding the whip over students in the advanced Class Study group.

A new code class was started on March 2nd. WB4AID is instructor of five aspirant cw operators - this will be followed by theory classes which will be announced later.

DX was run last week between K4EBZ and WA4TEN - distance approximately 7 miles - FB sig if the windows are open. BUT when WA4-TEN and AB4AID exchange QSO's on ten meters at 8 miles we also have to open the doors to let that signal in.

WB4AKH has made a modification to the HA-350 that is really something. Dick is a real receiver expert and you can depend on him to wring the last ounce of pep (not PEP) out of anything with tubes.

Warren Little, WA4EFA will again return to IBM for another tour in Huntsville. He attends U of Fla. as EE major, Senior.

Ed Wilder, WB4AIG, proudly announced in a letter received a few moments ago that he is now a conditional and will soon have a DL call. Ed is with the US Army in Germany.

Meanwhile, back at the shack, I'll reach for an 807 and lean back for another listen to some terrific DX. See you next month.

B.A.R.C. NEWS

Jim Wilson W4GDK

This year's big Auctionfest at Chaminade High School in Hollywood was gratifying for two big reasons. First, the auction brought money into the Club treasury. Almost more important, however, was the excellent participation by the members in the planning and administration of the event. It takes many hands to make a success of a big event like this and our gang came thru with fine help. Our new President, Ivan Peterson, is very pleased and proud of the cooperation given by all.

Big news! At our May meeting we are going to have Ladies Night. It should be very nice to have the privilege of bringing our KYLS or girl friends to see what we do at Radio Club meetings.

What does the Radio Club stand for? We're going to have a chance to say. The Club wants an emblem that will identify the Club. Maybe the ocean, the river, the palms or almost anything. Try your hand at designing a meaningful emblem and submit it to the officers. Maybe your design will be the winner.

At the next meeting, Detective Lt. McMahan of the Pompano Beach Police Dept. is going to give us a talk about Narcotics and their use. With so much interest today on this subject we must be sure to attend.

The April meeting of the Broward Amateur Radio Club will be held on Wed. April 10, 1968, at the Broward County Medical Assn. building at 2200 So. Andrews Ave., Ft. Lauderdale at 8 p.m. Coffee will be served. Anyone interested in ham radio is cordially invited.

ORLANDO RAMBLINGS

Hal, W4BKC

The weekend of Feb. 17-18 provided an opportunity for a group of Central Florida Amateur Radio operators to engage in a very worthwhile Public Service exercise. The

Cerebral Palsy Telethon Committee needed reports from several areas and asked Monty, K4VFW to coordinate the details. Operating from the Telethon were W4PAO, K4PWC, W4-RXE and K4VFW. Acting Net Control Stations were K4NTB, WA4NXV, WA-4OFX and K4ZXS.

Other Stations participating were K4OAB, W4BP, W4BKC, WB4CLJ, W4DDW, WA4DHI, WB4DPD, WB4-FJY, K0GBT/4, WB4IER, WA4JIC, K4JKX, W4KDT, WA4NBE, WA4ONZ, W4PTT, K4UGW, K4UTZ, K4URA, K4-UYN, WA4UZO, WA4WBF, WA4WBG, WA4WWP, WA4YZH and K4ZHN. Heartly congratulations to all who participated, sure speaks well for the Spirit of Amateur Radio in the Area.

We have had no reports of anyone contacting Wes, K4KRG since he left sunny Florida for the frozen reaches of Washington, D.C. anyhow if you do get your copy of SKIP at your desk in the bomb shelter under the Agri Building, drop a line and let us know if we should send a St. Bernard with a cask of Fresh Florida Orange Juice, Willaya?

The Orlando Hamfest Committee, with its chairman, Case, W4NGR met at the Statler Hilton Inn, on West Colonial, to iron out a few more of the thousand and one details that go into a successful Hamfest. He reports that so far everything looks good, getting the location of the various meeting rooms so they can be included in the Program, setting up breakfasts and luncheons and the Sat. Nite Dinner, making sure there was a piano for the Orchestra, making sure the door to the Swap Shop was large enough in case someone wanted to bring in a BC610. See You At the Hamfest APRIL 27-28. Come one and All.

SO. MIAMI RADIO CLUB

By John W4NE

To begin with, your scribe wishes to apologize for his bifocals fouling up the report last month to show Jim WA4KIL as elected VP at the recent annual meeting. Actually Doc Lerner WA4VQA is our 1968 VP.

Due to the school teachers' strike we were not able to hold one of our semi-monthly meetings at the school. That one, the late February session, was held at the home of our Prexy-Ray K4EHQ. After a short business meeting in the living room, we retired to the shack where Max W4-MEA set us all to work on the preliminary preparations in making circuit boards for a transistor code oscillator. After we get our home work done, Max will also provide the etching operation.

The Jr. HI quarters were again available for our first March meeting which was devoted largely to a slide talk and model demonstration on the Apollo project (3 men to land on the moon), provided by Southern Bell and presented by two of their technical engineers, Mr. Robt. Corley and Mr. G. E. Anthony. Altho they made it very attractive, they were unable to solicit any passengers from our club.

Several weeks ago our Jerry WA-4WUD made a trip to W6 land to attend the 6th district hamfest as the guest of W6FRZ. Jerry brought back some wild tales on California activities which we found hard to swallow. So at our last meeting, he brought with him Steve Locks, W6FRZ, VP of the Southern Cal. CX Club at Long

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DICK TESAR, WA4WIP

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Send No. 50 SASE Today

Beach, to back up his yarns. Steve did a pretty good job of it, answering the multitude of questions about California KWs as well as some of their methods in stimulating club interest.

All SW Dade Hams, keep in mind 1st and 3rd Thursdays and join with us at Ponce Jr. High School. We meet in the Industrial Arts room at the SE corner of the school grounds. John W4NE

VERO BEACH ARC

by W4AQVJ

Officers of the VBARC met in executive session before the regular bi-weekly gathering Feb. 22nd to discuss ways of improving our club. Committees were set up with ideas of increasing club membership, to stimulate activity, to raise money for the club treasury, publicity and to organize a group for this year's field day. A sight was chosen adjacent to the clubhouse on grounds owned by Tony Gibbons of Glomor Groves.

At our regular meeting, besides the local members, two visitors were present W8FMU Ray of Morgantown, W. VA., and W3MLW John of Lake Ariel, Pa.

W4SCK, I.J. Indian River County E.C., gave a complete report of activities in our participation during S.E.T. as well as our monthly QREC drill at which 5 stations reported Feb. 21st.

Code and theory classes for beginners will start soon as interest can be stimulated. Classes for upgrading of licenses to advanced and extra class for the incentive plan with theory the subject rather than code will start.

FT. MYERS CLUB NEWS

By W4SMK

The FMARC visited the Lee County area technical and vocational school last month. Members made a tour of the facilities and will return again next month to meet with some of the staff. There are tentative plans for the club to sponsor an amateur station in cooperation with the school's electronics department. We hope all members will get behind this worthwhile club project.

Don't forget the club meetings on 29.0 MHz on the second Monday of each month. This is a good chance for you to have those rag chews that you don't have time for on the regular meeting nights. It's also a good way to help assure that ten meters won't go the way 11 meters did.

W4TUB has been active on the 20 meter traffic nets and we have missed him on 75 meters. Fred says that Lucky WA4LKY is also very active on 20 running phone patches.

W4KET is planning to give the ARRL DX Contest a try on the second cw week end.

W4LNE has been delayed in his plans to return to sea and operate maritime mobile. Mick found too much work to do at his nursery when he returned this time. We heard some FB tape recordings he made of amateur and commercial stations while in the Pacific. He tapes much of his traffic to get solid copy in the QRN, QSB, etc.

Our deepest sympathies to the family of Don Simcox following his untimely death. Skip had certainly made great technical improvements under his guidance.

Don't forget the FMARC meeting on the third Monday of each month.

DADE RADIO CLUB NEWS

By W4EDP-Jim Bonnell

The meeting held at the museum on February 20 turned out to be one of the most interesting meetings we have had in a long time. The program was put on by Ray Day W4LFP, who has been working with satellite communications for Pan-Am for some time. He had many pictures taken in Europe and South America where they have run experiments for the edification of the local airline executives to demonstrate the use of satellites for communications between planes in flight and the ground. The satellites used in these experiments were the ATS satellites put up by NASA for experimental purposes. These satellites contain repeater systems that receive on 149 Mc and transmit, or rather retransmit, on 138 Mc. The particular satellite involved in these experiments is in fixed orbit over the East coast of Brazil at a height of 22,300 miles. Signals from its

transmitter can be copied over 40% of the Western hemisphere. The mode used in all experiments was FM and the copy was made with equipment that any ham could lash up, nothing exotic at all. Ray had recordings of all the received transmissions during the experiment and it is positively amazing the clarity of these signals after traveling over 45,000 miles, and coming through 2 transmitters and 2 receivers on the way. They could like locals. The only thing that spoiled the program was the poor attendance. We had nearly as many members of the Astronomical Society present as we had hams.

At our last business meeting, after long and detailed discussion, it was decided to hold a Hamboree in January 1969.

Well, so long for now,
73 Jim

SUNCOAST ROVING REPORTER

CATHY SOEHL W4BAV

Mark your calendar for April 27th-28th, Orlando Hamfest, at the Statler Hilton Inn. Be seeing you there.

W4KCG-Dick Norloff is stationed in Viet Nam, with the 128th Helicopter Co., located 5 min. from Saigon and Bien Hoa; has flown 1,000 hours over there and is pilot instructor for his company. Spent a week in Tokyo in Jan. on leave and is scheduled to return to U.S. April 29th and finally report to Ft. Wolters, Texas, June 5th as an instructor. Look forward to seeing you Dick on your return.

W4WPD-Shirley and W4UFR-Earl Hill celebrated Shirley's birthday by working for the Tampa Radio Club at the State Fair. Belated Happy Birthday, Shirley.

W4RQZ-"Sim" Simcox, who has been confined to his home on doctor's orders, is improving nicely; is now allowed visitors and occasionally gets on the air.

W4DXB-Ralph Stonemetz recently passed the Advanced Class license and is now working on 20 wpm to pass the Extra Class license. Congrats, Ralph. Heartfelt sympathy to W4TDK-Naomi Spence, whose Father passed away. Naomi is Secty./Treas. of SP-ARC.

W4GHR-Bill and W4BAV-Cathy Soehl; W4WPD-Shirley and W4UFR-Earl Hill; K4GZ-Charlie and XYL-Minna May; and Ethel and Joe Plate, met at Camp Everglades to enjoy a Bar-B-Q for the "Country Cousins." Good time had by 75 to 80.

The Brandenton Radio Club meets the 2nd and 4th Mondays at the Red Cross Bldg., 2614 Manatee Avenue W. and the Sarasota Radio Club meets the 3rd Tuesday every month at the 1st Federal Savings and Loan, 3550 S. Tamiami Trail.

FLORIDORA NEWS

Cathy Soehl W4BAV

Floridora DUES are due! Please send your \$1.00 to W4BIL-Fran Foley, 14698-63rd Way No., Clearwater, Fla. 33516, if you have not already done so. Also hope to see you all at the Orlando Hamfest, Apr. 27-28th, for our annual meeting and birthday party. Another day to mark on your calendar is May 19th, when we trust there will be a good Floridora representation at the SPARC Hamfest, at Lake Maggiore in St. Petersburg.

W4QBY-Dorothea Seaver and K4RHL-Elle Horner attended the Goldcoasters Chapter of QCWA, Feb. 5th, at the Captain's Table Rest., Deerfield Beach. Elle was honored by being presented a pretty certificate proclaiming her "YL of 1967." They also gave her an apron, with various inscriptions as "Hurricane Net" and the 3 large pockets at the bottom were filled with various articles such as "Dog Biscuits", etc. Congrats, Elle.

W4GGQ-Betty Clark, besides taking care of her 6 harmonics, helping Andy with SKIP, etc., is a voluntary Librarian at school one day a week. Really a worker!

W4UF-Dot & OM-George Saunders (who is now retired) are enjoying their new 14' mast sailboat, with bright blue sails. Clear sailing, folks!

W4CPX-Ruth Smith was happy to have home town friends, KIPCC-George Kayhce, of Newtown, Conn., stop and see her.

W4BAV-Cathy & OM, Bill Soehl-W-4GHR, on their way to the East Coast, stopped to see K4HSC-Mag and OM-Gordon Hennon at their lovely home

(Continued on Page 14)

April Specials at... THE NEW HAM SHACK at Tel-Appliance in Sarasota



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Ansel E. Gridley, W4GJO Telephone: (813) 955-7161



By AFB4JTK/AFC4BND

It has been brought to our attention that AIR is looking for a compatible transmitting frequency for the weekly air broadcast. Until such time, it will be difficult for most stations to copy the broadcast, unless they have the most sophisticated equipment. Present propagation changes make the present frequency good at times and completely useless at others. Why not a frequency near the 20 meter band? The propagation at those frequencies are good all year round.

Traffic has been very scarce lately. Why not originate some? The fellows overseas would like to hear from home. Those of us who have delivered traffic from SEA to loved ones here know this, and they appreciate the feeling of doing their part. Let's get the traffic out. When delivering traffic, inform the party that you can (if he desires) send a return message, at any time. Be a MARS BOOSTER.

Are there any stations who would like to recommend a station of the month. We think this would be a good idea. Your ideas on this will be appreciated. Shall we the editors or you the readers pick the station.

Listening in on 4416khz, Area 2 HF net, we find that there are many stations who have a need for training. They need to check into the Area 2 training net. The training net manager, AFB4UAG and his staff are doing a fine job, but sometimes he doesn't catch the ones who really need the training. We can readily hear that not enough people are checking into his net. Not only new stations but some of the "old timers" could use a little refresher course. Breaking into the net, especially while NCS is directing traffic is definitely not proper procedure, yet we hear it EVERY night. It does not help NCS or the program if we are to do as they say and not follow the example. Those who think they can use the training, check into the training net 4416-khz on Sundays, at 8:AM local time.

Don't forget the Orlando Hamfest on April 27 and 28. 8/FLORIDA SKIP April 1968

Radio Telegraph 1866 Style

According to patent No. 129,971, called an "Improvement in Telegraphy" and issued to a Dr. M. Loomis, D.D.S. of Washington, D.C. in 1872, radio telegraph as we know it today was actually discovered. Dr. Loomis successfully demonstrated his aerial telegraph on adjacent mountain tops in the Blue Ridge region of Virginia in 1866. At each site, kites fitted with strips of copper gauze along their edges were flown. The ground ends of the 700-foot kite strings were submerged in water. Signal reception was observed on galvanometers. In his patent application, Loomis stated that reception was perfect on cloudy days and as good as any using metallic conductors. His 1866 DX was 18 miles. This was a few years before Marconi was born.

The reasons why this patented invention did not succeed were: (1) Loomis did not realize that his device employed radio waves. He believed that he was obtaining a current of electricity that was up there waiting to be used. (2) He could not obtain financial backing either from a Congress just coming out of the Civil War or from men who thought him a crank. Had he continued his experiments, he might have discovered his error, which was not as important as his having found a way to send wireless messages/

(From BARC Bulletin W4IEH editor)

REAL DX

With all of this noise about the new proposals it is evident that somewhere along the line you have erroneously assumed that having an amateur license is one of your rights. It is not. It is simply a privilege conferred by a Commission and subject to withdrawal for cause.

Unless you have access to a big file of FCC Rules and Regulations and a FCC Bar Attorney you are only skidding your wheels when you say what you are going to do and what you are not going to do.

Onyx

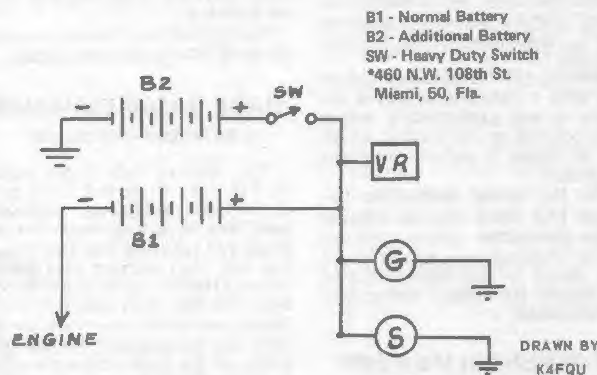
You can see us there and give us your thoughts or hop us for ours.

Mobile Battery Tip

by Dick Frederick, W4UGC*

Install an extra battery parallel with the regular auto battery and double the Ampere hour rating. No heavy diodes or relays. Connect with AGW #10 or larger wire and use a heavy duty switch mounted on the dash. CAUTION: Turn switch off when starting car but switch extra battery in while motor is running and both batteries will be charged by the generator. Extra battery is nice if you operate too long with engine off.

B1 - Normal Battery
B2 - Additional battery
SW - Heavy duty switch



B1 - Normal Battery
B2 - Additional Battery
SW - Heavy Duty Switch
*460 N.W. 108th St.
Miami, 50, Fla.



THE GOLDCOASTERS - Jan. 22 meeting. Retired FCC well represented. Foreground - Irv Weston W3BP, former Chief Monitor Service Division explaining how to clear up plumbing troubles to Ted Wayne, WB4CBP. Rear - George Turner, K4AR, former Head of Field Engineering Bureau. Frank Kratokvil, W3BA, former Chief FCC Field Engineering Bureau. Lee Quaintance K4BW, former FCC Engineer. Vance Murr W4FWI, Fla. Skip Staff.

The Goldcoasters meet at the Captains Table at Deerfield Beach for lunch 1230PM. Coming meetings April 15, May 13, June 10. Socializing hour commences 1130AM. All guests welcome.

(Photo By W4SN also former FCC)

'IJ' ROVANG

(Continued from Page 1)

Lake Mills - first as a helper and later as a telegraph operator.

Although IJ learned to be an American Morse operator in 1913, and the Continental Morse in 1916, and carried a First Telegraph ticket since 1925, he is a newcomer in the ranks of amateur radio; obtaining his first license in 1962 - general.

In 1916, IJ enlisted in the Navy as a Landsman for Radio and promptly was sent through the Brooklyn Navy Yard Radio School. Later he served on the battleships USS Rhode Island and USS Virginia. In 1919 he was assigned shore duty at Manistique, Michigan where he married the prettiest girl in town. Faced with the horrible thought of going back to sea, especially with a new bride, IJ took his discharge as a Chief Radioman (PA) in 1924, thus ending his military service. It was in this year that the U.S. Post Office Department decided to extend their new Air Mail service from Chicago to the west coast on a night flight basis, and IJ went to work with them, at Omaha, where he was introduced to one of the fastest cw circuits in the country.

In 1927, when air mail carrying was turned over to private carriers and the communications system, emergency fields and the lighted airways were turned over to the Department of Commerce, IJ went along with the latter as an Airways Traffic Supervisor, in charge of building, maintaining and operating various types of Air Navigation facilities; serving in Omaha, Cheyenne and Salt Lake City. In 1932, IJ was transferred to the Chicago Region where he served as a Maintenance Inspector until 1938. He was again transferred to the Kansas City Regional Office where he served as Chief Engineer (electronics) until 1942, in charge of installation and maintenance of Air Navigation facilities. In 1942 he became Superintendent of Airways for three years, where he was in charge of design, construction, installation, operation and maintenance of air navigational facilities in an 11 state area. From 1945 to 1955, he served as Chief Engineer on the Kansas City Region with respect to installation and maintenance of ANF. He served as chief of the maintenance branch in Honolulu from 1955 to



HERE IS FLORIDA'S TOP traffic man - I.J. Rovang, WA4SCK, EC of Indian River County in Vero Beach, IJ also holds the OBS appointment. (Photo by W4DFZ)

1956 in charge of maintaining facilities throughout the South Pacific, including Wake Island, Guam, Canton Island, etc. From 1956 until he retired in 1962, he served as engineer in charge of maintaining air navigation facilities throughout the United States, involving 10,000 personnel - engineers and technicians. He retired with 45 years service.

IJ now enjoys his tropical setting home in Vero Beach, and in spite of being retired,

is now the busiest man in town and would have no time to spend on a regular job any more. He is a life-time member of the Masonic Lodge, past President of the Washington Air Mail Pioneers, a member of the Airways Pioneers, Vice-President of the Vero Beach Amateur Club, a member of the ARRL, and devotes much of his time in teaching radio to would-be amateurs locally, ec Indian River Co.

From Here and There

SKIP magazine has shown steady improvement during the years I have been a subscriber ... Bob David W4YK, Clearwater ... In the 20's I had a call and a homebrew BC station in Evanston, Ill. Then no ham activity until retirement in '62. Would like to suggest a ham list of interpretations of abbreviations. I am certain this scares out the timid. The new deal, raw deal, double deal made initials popular. Do we have to copy this same habit. How about it? WA-4QZL ... Avon Park ... SKIP is complete enough to keep me informed about "ham" news even though I don't have free time enough to be very active. I'd be glad to see its horizons widened to national and DX level but preserve the very human intimate approach. K4TCV, Coral Gables ... Have back issues of QST, CQ and Pacific Radio for FREE. Substantially all QST's from 1935 or 1936. Need the space if someone will come and get them. J.H. Webb, W4NE, Miami Fla ... Don't forget the FLORIDA QSO PARTY. See details elsewhere.

New Amateur Radio Antenna - The X-15

For the Novice, Mosley developed the X-15 - a two element, easily constructed do it yourself antenna for the enterprising amateur radio operator. When he becomes a general, he can adapt the X-15 to 10 meters by a simple readjustment of the elements according to the instructions given. The wide spaced, heavy duty X-15 has a VSWR of 1.5 to 1 or better and a feed point impedance of 52 ohm gamma match. All parts included except the coax.

The X-15 has a forward gain of 5 db compared to reference dipole or 7.1 over isotropic source, with a 20 db front to back ratio. It is full power rated up to 1 KW AM/CW and 2 KW P.E.P. SSB input. Maximum element length is 22-1/2 feet at 15 meters; windload is 64 pounds (EIA standard at 80 MPH) with a wind surface of 3.2 square feet. Assembled weight - approximately 13 pounds; shipping weight - approximately 16 pounds.



ARMY MARS

by Joseph C. Patterson,
AD4TZI

The following may be of interest to other readers of FLORIDA SKIP in addition to those who are members of Florida Third Army MARS. Captain C. C. Reynolds, Chief of Motor Vehicle Inspection for Florida's Department of Public Safety writes on Feb. 2, 1968 as follows:

"The new Florida Motor Vehicle Inspection Law provides that all vehicles with license plates that are designed differently from the usual numbering system are to be inspected on a schedule set up by the Department of Public Safety.

"This is to advise that the month of NOVEMBER will be the scheduled time for Florida amateur radio operators to have their vehicles inspected if such vehicles are bearing their amateur radio call letters."

The reason for this early report is that an earlier decision had been made to call up vehicles with amateur radio licenses in June. This later and final decision is to put off the first of these required semi-annual inspections until the month of November.

If you have any doubts about the value of the services performed by the dedicated members of Army MARS, just cast a thoughtful eye over these figures:

During 1967, 119,527 messages to and from soldiers and their families were handled through Army MARS facilities, 18,667 during December alone. If this kind of public-spirited service appeals to you, and you are willing to take your reward not in material things but in good fellowship and in personal satisfaction with a job well done, then you are the kind of an amateur who will get the most out of Army MARS participation.

Mail a postal card to Wade L. Nelms, MARS Director, Third US Army, Fort McPherson, Georgia, 30330. Just say "Tell me more about Army MARS and how I can qualify to belong."

NET NEWS

FLAMINGO NET NEWS

By W4EDP

The net members were all saddened by the unexpected death of the brother of our NCS, Gerry was well known to all of the old timers on the net as well as many of the younger members who had occasion to call Walt at home. Although not a ham, Gerry will be missed by all of us who knew him.

Nothing spectacular has been going on as far as net activities go. Ten has been open all day and far into the night on some days as well. Wild and exotic stuff is there if you listen for it.

If you listen in on the net you may have heard Carol, a 2 year old belonging to Carl and Evelyn Gauzens, get on the mike when mama checks into the net with a "hello Walt." Well, a couple of weeks ago she grabbed the mike and gave out with "Hello Walt" while daddy had his hand inside the rig doing something with the gadgets one finds inside of radio transmitters. According to Evelyn "Carl looked sort of like a neon lamp for a moment or two." So the Gauzens house now has a new safety rule. Lock up Carol before working on the rig!

Looks like that is the crop for now folks. Come on up, or down, if you prefer, to 29.044 at 7:30 p.m. EST on Friday and visit with us. Everybody will feel good about it if you do.
73 Jim.

OLDEST PHONE NET
ON AIR

KNIGHTS of KILOCYCLE

SUNDAYS

3910

7:30 A.M. Nov. to April
7:00 A.M. April to Nov.

FMTN
By W4AKB

The following stations were added to the FMTN Roll Call in February: John W4GUJ, Jacksonville, Mon. and Wed.; Randy WB4FGW, Sarasota, Saturday; WA4FSF, Sanford; Ruth WA4HED, Ft. Lauderdale.

FMTN meets every day except Sunday, at 12 noon EST or 1700z on 7230 khz. We welcome all modes, AM, CW SSB to check-in. Any station desiring to be placed on the roll call should address a formal message to the Net Manager. He will see that the Net Control Stations are all advised.

During the month of February, there were 25 sessions with 671 stations handling 434 formal messages, average QNI 26.3; average QTC was 13.4. Our Net Manager is W4SDR, Clyde in Daytona Beach, Florida and Asst. Net Manager is Herb, K4DAX in Bradenton, Florida.

73, Charlie

QFN REPORT



By Bob
Blumberg
WA4OHO

QFN posted an excellent, highly efficient rate of 0.7148 messages per minute for the month of February. In 58 sessions there were 752 check-ins, 747 pieces of traffic handled and the net ran only an average of 18.02 minutes per session.

We welcome two new members to our ranks: WB4IER Ralph in Tavares and W4DL Dan in Hialeah.

Please make special plans to attend the QFN Breakfast on Sunday morning at the Orlando Hamfest. This event is always the highlight of the year for QFN.

There are still several opportunities to serve QFN as regional net representatives. We need some volunteers.

W4FPC has been off for several weeks because his wife is in the hospital. We wish Mrs. Mac a speedy recovery. W4SRX (WA4LBM) is also missing, due to having been transferred to Thailand.

A recent QNC from W4BVE reported that old QFN member K4-UBR was wounded in Viet Nam and had been flown back to a stateside hospital. It wasn't good news, but now Jerry is home and safe!

I read a comment in last month's SKIP by someone who had tried

QFN and got the "cold shoulder" and dropped it. If everyone who wasn't happy with something gave it up before really knowing what was going on, there wouldn't be many "doers" left. It takes more than just a few check-ins to get into the swing of things. We invite everyone to join us on 3651 kc/s daily at 2330 Z and 0300 Z. We will adjust to your code speed. Don't give up after just once or twice - that is not the spirit of amateur radio. CU on QFTI

TROPICAL PHONE NET

By Ken W4SMK

Surprisingly enough, February was an even better month for traffic on TP-TN than January. Some of you fellows have really been keeping us busy, but we aren't complaining, understand. A traffic net with no traffic to handle is just as sad as one with lots of traffic and no stations to handle it all.

We are getting better representation from some of the key cities than in the past. New net members on the roll are Tom WB4IYJ in Orlando, Ted WB4FLW in Ft. Lauderdale, and Jim W4KOA in Key West. We also lost John K4NKA to the Yankees, and another John W4QLZ to the military. Glad to have the new stations and good luck to the departing members.

WA4NBE will be bringing in another big load of traffic during March from the Brevard County affair, and WA4-TWD is planning a traffic session around Easter in April. TPTN welcomes fair traffic as this helps us keep things lively after the big Xmas rush when the traffic dwindles a bit.

We now read official bulletins and QNC's at the beginning of the net as well as during the following roll call. All stations, especially those with the bulletins, make an effort to be on frequency at 2200 GMT sharp so you don't miss anything. The early bird gets the word, etc. WB4EPD suggested this change so that stations could be moved off during roll call and not miss the bulletins. Let us know how you like

the idea. Constructive criticism is always welcome.

WB4EPD, our ambitious Saturday NCS, plans to run the net from the Orlando hamfest that weekend. If you are there check-in with Rich eye ball style.

WFPN

By W7BNR/4

The West Florida Phone Net covers the state from Tallahassee to Pensacola, with Jacksonville, Vero Beach, Louisiana, and several Alabama stations checking in regularly. The net meets daily at 2300 Z on 3857 kcs. Steve Ingram, W7BNR/4, is currently serving as net manager.

During the recent SET, the West Florida Phone Net was in session for 23 hours. W4IKB handled most of the NCS functions with welcome relief coming from WA4YNW, W4NOG, and WA4EPH. W4JGD maintained regular liaison with QFN.

A total of 198 messages were handled on the net; 119 of these being priority and the remaining 79, routine. Roughly 300 amateurs were active in West Florida, about 260 of these on the West Florida Phone Net.

The Bay County Civil Defense Net, on 2 meters, was in session with the WFPN for 2 hours and 10 minutes.

The total QNI for February was 729 averaging 25.1 for each of the 29 successful sessions. The total QTC was 108, averaging 3.7.

When man was unable to explain unknown things he adopted beliefs to explain them. But even though study showed that many old beliefs were false, many people could not change. These are the people who dare not listen lest their ignorance and superstition be exposed to themselves.

-W5RIH, Spark Gap Times

TOP TWENTY TRAFFIC TAKERS

Each month we are happy to list the top twenty traffic takers in Florida. Next month we hope to see your call here.

1. WA4SCK	BPL	1963	11. K4LEC	122
2. WA4IJH	BPL	1520	12. W4ZAK	114
3. WB4ATW	BPL	694	13. WB4DHZ	112
4. WA4NEV		409	14. WB4DDO/4	110
5. W4ILE		386	15. W4BVE	105
6. WB4EPD		344	16. WN4HPS BPL	105
7. WA4FGH		299	17. W7BNR/4	100
8. WA4IMC		271	18. W4AKB	89
9. W4SMK		259	19. WA4TWD	85
10. W4SDR		176	20. WA4NBE	79

TRAFFIC HOUNDS

By Jesse H. Morris, W4MYB

NET	QNI	QTC	SESSIONS	AVG QTC
FAST	908	220	25	8.8
FMTN	671	434	25	26.8
FPTN	451	195	25	8.0
TPTN	661	375	25	15.0
QFN	752	747	58	12.88
GN	182	143	29	4.9
FATT	133	69	29	2.3
WFPN	728	108	29	3.7

TRAFFIC MEN



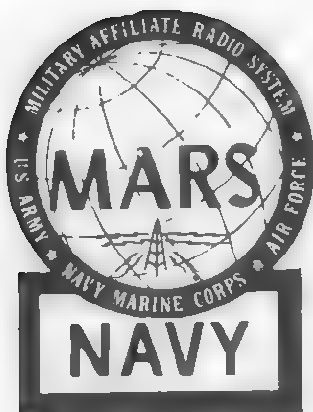
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Florida Skip—Box 501—Miami Springs, Fla. 33166

ARE YOU GETTING
THE MESSAGE?



Jim Wilson NØWCK-W4GDK

Knowing that new parts are most useful to ham experimenters, 6th District Navy MARS is trying an interesting experiment. A group of members around Aiken, S.C. have secured thru MARS the entire stock of parts from a large

electronic firm whose government contract was terminated. In a building, they have installed much shelving and have catalogued the available items. Navmars members in the 6th N.D. will be able to send parts requisitions direct to the station supervising this activity giving the quantity needed and the lot number.

NØITK in Clearwater has just announced that his RTTY gear will be on 24 hour alert. As manager of the 6th N.D. RTT nets he has developed an auto call which can be activated by a 10 sec. mark signal followed by his call. Our director NØASC in Charleston S.C. plans a similar set-up soon, and NOZAB of Georgia already has it. This alert will be valuable.

South Florida has good participation in their 4015 KHZ net at 2200 daily. N.E. Florida

has excellent coverage on 4008.5 KHZ USB at 2200 Z.

N.E. Fla members were very active in the recent Cerebral Palsy Telethon. The frequency used was 143.7 MHZ. One member who is a doctor was late in returning for a patient's appointment. After explaining why he was delayed, the patient was so impressed that he wrote out a \$100 check as his contribution to the effort.

The So. Florida net on 27.95 is steadily gaining new members.

It should be pointed out that

participation in Navy MARS makes it possible for hams with Technician licenses to operate using phone on lower frequencies such as 6970, 4015, 4008.5 KHZ and participate in traffic nets on those and other frequencies. CW and radio teletype also can be used on 7301 KHZ.

N.W. Florida traffic net meets nightly on 4015 KHZ LSB at 0200 Z to 0230.

If you wish additional information about the Navy MARS program you may secure it from this correspondent.

'BUY FROM YOUR FELLOW AMATEUR' DEPT.

FELLOW AMATEUR: Here are several firms that have an interest in YOUR business! They have seen fit to support the FLORIDA SKIP by giving us a little revenue each month in return for your support. If you have a need for the services listed, you can't possibly do better than to deal with a fellow amateur, can you?

 <p>FLORIDORAS</p> <p>EACH TUESDAY 9 A.M.</p> <p>3933 kHz ALL YLs WELCOME</p> <p>Pres. W4WPD, V.P. W4UF, Sec. W4EHN, Treas. W4BIL</p>	<p>WIRELESS SPAGHETTI NETWORK CLUB (WSNC)</p> <p>FOR ITALIANS OF THE WORLD. MEMBERSHIP OVER 100. FREQS 14.166, 14.300, 21.390 and 28.6. MORE INFO WRITE TO: Robert Pishella, 11WRP, Piazza delle Iris 28, Rome, Italy 00171.</p>	<p>COMPLIMENTS OF INDEPENDENT COUNTY HUNTERS "OTTS" K8CIR "BERTHA" WA4BMC</p>
<p>For the BEST, get a time-tested ROHN TOWER Complete planning and erection service.</p> <p>For more info — call or write: ED ROLLER, W4WYJ P.O. Box 894 Punta Gorda, Fla. 33950 (813) 639-2148 or 335-6651</p>	<p>MILK</p> <p>NATURES MOST NEARLY PERFECT COMPLETE FOOD</p> <p>W4GM — E.C. "Clark" Mattson Okeechobee, Florida Producers of Grade A Milk</p>	<p>don simcox ADVERTISING LAYOUT COPY PREPARATION & ASSOCIATES</p> <p>CALL 821-8432 801 W. 49TH ST. HIALEAH</p>
<p>Tedco of Melbourne, Inc.</p> <p>Galaxie Hallicrafters Elco Ameco Johnson</p> <p>WHOLESALE ELECTRONICS 2678 N. BABCOCK ST., MELBOURNE, FLA. Ted- WA4DHI Tiny-WB4EJX Ted-W4JHM</p>	<p>ROY'S RADIO & TV ZENITH SALES & SERVICE 5527 S.W. 8TH ST. — MIAMI ROY — W4ITO — FCC Commercial Phone: 661-0823 CHARLIE — WA4CIK IRA — WA4BGL</p> <p>Same Location & Ownership Since 1955</p>	<p>'YANKEE FONET' 3,975 (AROUND THE CLOCK)</p> <p>W3ADK W3USG W3BWH W8DUX W3MMG WA3CHB</p>
<p>W4IAD W4TVK Specials on Foreign Tape Recorders, Radios, Hi-Fi—Stereo Equipment Parts—Service</p> <p>SAFS, INC. AUTHORIZED FACTORY SERVICE "Hi Fidelity Engineers"</p> <p>Hymen Lessin 2115 J.F. Kennedy Blvd. John Horn Tampa, Florida</p>	<p> NORTH PARK T.V. is Factory warranty on all SWAN equipment in Florida. We welcome any inquiry and will answer all correspondence.</p> <p>— ED KLAR, W4FAD — 6420 Central, Tampa, Fla. 33604 Phone 232-3101</p>	<p>JENKINS SUPPLY CO., INC. 1686 Clearwater — Largo Road Phone 584-5282 Clearwater, Florida 33516 K4OF1 Amateur Radio Supplies</p>



DAYTONA BEACH Amateur Radio Association equipped and operated an amateur booth at the Annual Daytona Beach Home Show. The show manager estimated between 40,000 and 50,000 people attended and saw the booth in operation. 637 messages were handled in the 5 days and went to 46 states, Canada and many servicemen overseas. Comments from the show executives, press and public were most favorable. Project chairman was WA4JCP. Operators were W4UQZ (left) WB4BPL, WA4OQX and WA4WGL (right). The desk was manned by the above and WB4GUH, WB4BPO, WA4SYH, WA4NJK, W4IEU, WN4HQX and Barb (WA4JCP's mom). Operation was almost entirely cw on 80 and 40 meters. The station operated under the club call K4BV and used the Heathkit SB series. A 2 meter FM unit was used for local communication. Prime outlets for traffic were section and area nets of the NTS.

(photo via WA4OQX)

10 Bad Rules for NET Members

By W4SMK

The following rules are for phone net members who wish to add more gray hairs to the heads of their net controls. We hope that none of these practices are followed at your station.

1. Never be on time for net roll call. Always check in late with a long list of traffic going to stations who have already secured.

2. Never be on the net frequently. This lends a certain aura of mystery to your station.

3. When you call in give your complete life history and any other trivia that comes to mind, but forget to list your traffic.

4. If you have no traffic be sure to answer when the NCS calls for "stations with traffic only."

Follow other NCS instructions similarly.

5. Insist that your call be placed on the net roll and then don't call in for the next six months. When you finally show up be indignant because you were dropped from the roll.

6. Never inform the NCS that you are short of time, must QR-T, QSY, etc.

7. Break in every few minutes whether or not you have anything important to say. This helps keep the NCS on his toes.

8. Run your audio and VOX gains wide open so the NCS can frequently hear your XYL sneezing in the kitchen.

9. If net control asks a weak

Whisperings From An Assistant SEC

Tom Chisholm W4FP/A4FP

At this writing it is possible my monthly literary contribution to SKIP will not be printed. I trust this will not be the case. This thought stems from the untimely passing of Don Simcox who had been handling the layout and printing of FLORIDA SKIP for a number of years. It was not my pleasure to meet Don I only knew him by his art, which made the reading of SKIP such an added pleasure to a countless number of readers. Although Don has left a little ahead of schedule, all of us must leave sooner or later. In Don's case, I think it should have been much later. My sincerest sympathy to his lovely wife and the rest of his family.

As the deadline for all SET reports to ARRL was March 15 all reports we hope have arrived in time. The total reports that have reached ARRL and W4IYT at this date indicated an improvement over the previous SET in points scored and less EC's participating. The following figures have been prepared for perusal by our 1213 ARPSC members. Perhaps if plans are started around April or May of this year, we could top the nation, as we most certainly have

the capabilities, all we need is the interest and a little of the ARPSC members time for the next SET.

(QST. 3/67 P. 81)

SET 1966	SET 1968	
	Pts.	Pts.
Brevard	209	0
Broward	255	0
Clay	6	0
Dade	240	287
Duval	279	369
Hillsborough	205	227
Indian River	125	104
Lee	168	99
Lake	-	99
Manatee	107	0
Okeechobee	38	0
Osceola	46	0
St. Lucie	0	40
Pinellas	148	0
Polk	214	332
Orange	0	338
St. Johns	0	193
Alachua	0	248

In 1966 13 reports, 2040 total points. In 1968, 9 reports 2197 total points.

East Fla. has 1207 registered ARPSC members, with 32 counties and associated EC's, and 11 counties without EC's. Congratulations to all participating EC's and members for a job well done.

CUL W4FP

SUPPORT FLORIDA SKIP ADVERTISERS

station to repeat, you and six of your pals immediately break in to "help relay", and thus cause a really big blast of QRM.

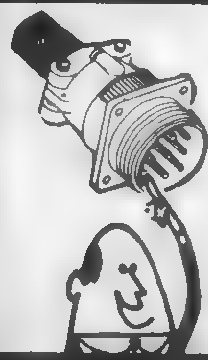
10. Do not under any circumstances ever offer to be NCS, relay a radiogram, mail a piece of traffic, or anything helpful like that. After all, what are traffic nets for, anyhow??

From the Press

The following appeared in the St. Cloud News via W4SCY.

"Ham radio operators will be doing a good turn in this county area Saturday and Sunday that will save over a thousand dollars for the cerebral palsy telethon wonderful effort. Instead of expensive long distance calls to phone in contributions to Orlando headquarters, these "hams" will radio them in for free.

Our old brown Stetson hat is off to these hams. In time of any emergency, they are there to help. They will even send messages from you to loved ones serving in Vietnam, or deliver messages to your from our boys over there. They are our main line of defense, too, during hurricanes or national disaster. What do they get for such public service? A big round zero. Being of help when help is needed is all they ask. Thanks to Kiwanis for initiating this latest service in the palsy telethon."



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Florida SKIP DIRECTORY

Each month you will find the following listings. Keep it handy. ARRL Officials are listed free. Florida Nets are listed free upon notification from net manager. Clubs listed for \$12.00 per year. (Free to clubs taking box ads elsewhere.) Any individual amateur may be listed for \$5.00 a year. (The ones who really care.) Let's fill up this page!

ARRL LISTINGS

Director, S.E. Division
CHARLES BOLVIN W4LVV
2210 S.W. 27th Lane
Miami, Florida 33133

Vice Director, S.E. Div.
A. L. HAMEL, K4SJH
220 N.E. 26th Street
Pompano Beach, Fla. 33064

SCM E. Florida
JESSE MORRIS, W4MVB
P.O. Box 1241
Jacksonville Beach
Florida 32051

SCM W. Florida
FRANK M. BUTLER, Jr. W4RKH
323 Elliott Rd., S.E.
Ft. Walton Beach, Fla. 32548

SEC East Florida
ANDY CLARK, W4IYT
41 Lenape Drive
Miami Springs, Fla. 33166

SEC West Florida
G.D. McKECHNIE, W4IKB
1000 N. 6th Street
Chipley, Florida 32428

Asst. SEC East Florida
TOM CHISHOLM, W4FP
P.O. Box 2273
Lakeland, Florida 33803

NET LISTINGS

QFN (all Florida)
Daily 2330 & 0300Z
3651 kc. Net Managers
W4BVE/ W440H0

FSBA Sundays
2200Z on 3940 kc.

FSBEN Thursday
0030Z on 3940 kc.

KNIGHTS OF KILOCYCLE,
Sundays,
1200Z on 3910 kc.

GATOR NET (GN)
Daily 1330 on 3651 kc
and 1630 on 7115 kc
Net Manager: K4C00

SATN South Atlantic Traffic Net
Mon. - Sat. at 0330z on 3945 kc.
Net Manager WB4DSP

TROPICAL PHONE TRAFFIC 'NET (TPTN)

Daily except Sunday, 2200Z on
3945 kc.
Net Manager: W4SMK

FLA. AMATEUR SIDEBAND TRAFFIC NET

(FAST) Daily except Sat.
2300Z on 3940 kc.
Net Manager: WA4NBE

WEST FLORIDA PHONE NET (WFPN)

Daily 2300Z on 3957 kc.
Net Manager: WA4ZGI

FLA. PHONE TRAFFIC
NET Mon. Thru Sat.,
1200Z on 3945 kc. Net
Mgr: WA4C1Q

NOVICE HURRICANE
NET (NHN) Sat. & Sun.
at 1930Z on 7165 kc.
Net Manager: WA4YAK

INDIVIDUAL LISTINGS

"SLIM" and BERTHA EGGERT
WA4AZZ/WA4BMC
1510-17th Avenue-North
Lake Worth, Florida 33460
Regards to all our friends.

CLUB LISTING

DADE RADIO CLUB, INC.
(W4NVU) 1st & 3rd Tuesday,
Museum of Science
3280 So. Miami Avenue
Miami, Florida
Mailing address: P.O. Box 73
Biscayne Annex
Miami, Florida 33152

NORTH FLORIDA AMATEUR
RADIO SOCIETY W4IZ
2nd Thursday, 7:30 P.M.
Duval CD Headquarters
107 Market Street
Jacksonville, Fla. 32202

ST. PETERSBURG AMATEUR
RADIO CLUB, Inc. W4GAC
Meetings: 1st Friday
FPC Lineman's Assembly Hall,
25th St. & 25th Ave., N.
Mailing Address: P.O. Box 4026
For information phone:
544-1856 or 526-6731

'SKIP'-eroo's THE BRAIN DEPARTMENT

Unscramble each line of letters and insert them in order in the circled boxes and place in the box or boxes at the bottom the boxes to the left of them, to find the answer to this month's puzzle. Each line forms a common word, mostly electronic, which months "Skip". This month's "SKIP"-eroo must be in the proper order to give the correct solution. Then unscramble the letters within

NO. 8 "EARNs A CERTIFICATE"



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Have you got a puzzle or a SKIP-eroo? If so,
submit complete with solution to K4FQU, 1413
Davis Dr., Ft. Myers, Fla. 33901

FLORIDORA YLs (W4FE)
All licensed Florida YLs invited
to join.
Mailing address:
Pres. Shirley Hill, W4WPD
1710 Lambright,
Tampa, Fla. 33610
Nets: Tues. 1400Z on 3933 &
Sun. 1900Z on 7275 kc/s.

Every noble deed springs
from a character that has been
trained in small things.

—Megiddo Message

Time is the one thing we possess.
Our success depends upon
the use of our time, and its by-
product, the odd moment.

—Arthur Brisbane

Like yeast in dough, the family's
basic character works in
and through the life of each
member.

—Carlyle Marney

April 1968 FLORIDA SKIP/13

CLUB NEWS

(Continued from Page 7)

on Red Beach Lake. Cathy can vouch for the delicious tomatoes raised in their garden and also found that Meg is an artist, as many of her beautiful paintings adorn the walls. Meg will be in Ga. after May 1st.

WESTERN FLORIDA NEWS

Frank M. Butler, Jr., W4RKH

Pensacola: W7BNR/4 has taken on job of PAM and WFPN Manager. W4UUF has 500 watts and 32-element array up 78° on 144.1 Mc SSB. The 2-meter net is up to 12 stations now. The 6-meter SSB net meets daily at 1930 CST with WB4DHL as NCS, on 50.11 Mc.

Fort Walton/Eglin: WN4GMH, WN4HJ and WN4CY all passed the General test. K4UBR returned from Viet Nam tour. Playground ARC has resumed work on its emergency comm. ven. The EARS club had a good attendance at its annual banquet. WB4GYX is etching crystals for 2-meters. WA4IYH acquired a tri-band beam. W4ZGS is mobile on 2m FM. WA4EVU raised his repeater antenna to 80'. Chiple: WB4FLK is moving to Kissimmee.

Port St. Joe: As part of new Court-house dedication, the CD radio room was manned and made contacts around the state on 75 and 2-meters. The 2m FM link to District Hq. in Panama City proved very successful. Taking part were EC K4RZF, W4WEB, W4MXN, K4LQQ, K4YSQ, W4IKB, W4RKH, and WA4NRP.

Tallahassee: WB4AWU is on 146.94 FM; W4MQQ and K4HQC are looking for rigs. W4JGD had a nice write-up in his company newsletter.

Cross City: K1FVW/4 was appointed EC for Dixie County.

FLA. VHF SIDEBANDERS

By R.D. Ralston-K4LFF

At this time, I have been off SSB for 5 weeks, and from reports I have received, activity has not been the best; definitely nothing like January started out, but it's still much, much better than some I have talked with on AM who report that February 12th is the first time the band had been open since December 16th. They have either not been listening or they should get a receiver that would copy SSB and CW.

WA4MHS worked W6ABN and WB6WRI on CW on the above date plus hearing some of the 7's that I heard and I am using a G-50 at the present, and it is not even designed for anything except AM. I think too many are either satisfied with working locals they could call on the telephone or just waiting for an opening that is so good that all you need is a 6er and hook the antenna to the window screen or some

rabbit ears. I think this type attitude and operation is going to cause us to loose 6 meters like we did 11 a few years back. I know many who work the low bands feel that 6 is only for local activity, but I feel that if they were to visit a few of the more serious VHF'ers (and they do not all have technician tickets), they might just get a change of heart in their opinion that all the technicians were a bunch of incompetent and unqualified characters.

Personally know of many technician class who could put some of the so call "brains" to shame, not only theory wise, but in CW and in being a good operator. One "general" wrote a nation wide article about 2 years ago (call on request), that insinuated that VHF operators were not smart enough to operate SSB. I know of some (one with a 2 letter call), who was on 6 SSB before some of these "brains" got their CB license. Hope to see you all next month, if still alive.

CITRUS CENTER AMATEUR RADIO CLUB

On January 16th, 13 amateurs met to establish a new club. On January 23rd, 20 amateurs assembled to form the club. The name "Citrus Center Amateur Radio Club" was adopted. A constitution was drawn up and officers elected: K4GRE President, W4NYL Secretary, WA4ZRB treasurer, and K4YLK Acting Chairman. There are now 23 charter members. Code and theory classes are in their third week.

Much to come and being discussed - I believe this club will go far. Meetings are 1st and 3rd Tuesdays, 7:30 p.m. at the First Federal Savings & Loan, Corner Orange & Tennessee Ave., east of the telephone company in Lakeland. Code and theory classes at Florida Southern College, Lakeland, at the Ordway Art Bldg., room OA-19 at 7:30. If you are in town stop or make a special trip. You are welcome to visit us.

WB4CEX
Publicity chairman,
CCARC, Lakeland

LAKE AMATEUR

By Zach Bruce WA4TJS

The Lake Amateur Radio Association, Inc., was invited by the area Civil defense office in Wildwood, Florida, to visit their emergency communications command post. We went over there on February 29 and were cordially invited in. The equipment was very fascinating. Included in the ham equipment were: Collins KWM-2, 2 Drake TR-4's, BC-348 receiver for weather reports, 2 model 15 RATT machines, Collins 30S-1 linear amplifier. Also there were several NBFM transceivers for inter-communication between the Wildwood EOC and Florida services such as the FHP, SRD, Forestry Service, etc. There is a 65KW generator with 3-1000 gallon fuel tanks and a complete air conditioning system which can replace the entire air supply inside the building in one minute and ten seconds. There are showers, dormitories, a kitchen, offices, and a 75-100 foot Rohn tower outside. It sure is a nice set-up and I'm sure many other areas have equal set-ups and some don't have any.

One of our club members, Reid O. Martin, W4VDY, has been awarded certificate #16 in the National

Astronomical League Messier Club. Reid won this because he has observed and recorded his observations of the 104 truly existing Messier objects. These objects were compiled into a list by Charles Messier in the 1700's and published in 1784. His aim in doing this was to help comet seekers avoid confusing them with comets. Fifty of these are clusters and nebulae outside our galaxy-- often very far outside and very difficult to find and observe. If you have never seen some of these beauties through a scope you have missed a sensation greater than working New Zealand or some other 'short-skip' - how's several hundred lightyears for DX??????????

73's to all of you from the LARA.

AIRSTREAM RADIO CLUB

For those of you who are interested, the Wally Byam Caravan Club of AIRSTREAM Travel Trailerists have a Ham radio club with over 200 members scattered thruout the 50 states (That's right, including Hawaii and Alaska). At the time of writing a large part of them are in Florida for the winter and are holding informal nets daily at 8AM EST on 7230 Kcs. This will probably taper off as the caravanners scatter to the four winds for the summer season, but there is a weekly schedule on Sundays. This starts at 8AM EST on 3963, with a net in the northeast and one in the southeast separately. At 11 AM EST there is a national get-together on 14308, and at 12 noon on 21408. Dan Haynes, W1MDK is presently the president, and has been spending the winter in Dania.

Ken Aitken, W4F1Q/W2OUY, 1116 Lakeview Dr., Tavares, FL 32778 is NCS for both the 3963 and the 7230 freq. Join them when you can and happy trailering!

FREQUENCY MARKERS

Looking for a 10 kc marker and you don't want to bother making a multivibrator? While this is not new you may have missed it so here's a repeat on a simple way.

Hang a diode (seems to make little difference what kind) across your antenna terminal to ground. If you are in an area where there are a number of broadcast stations the chances are good that you will hear a conglomeration of all of them and when you chase them down they are exactly 10kc apart.

If you do not hear them with the shunt system try them in series with the antenna. I have found that the low impedance input receivers need then series connected. Two in parallel seem to do a better job also.

There is a possibility that the beats you get will not be 10kc for your area but after checking in both the Miami and the Tampa area the beat is exactly 10 kc.

For normal reception you need a switch to cut out the

Souping Up the Collins 51J-3 Receiver

The Collins 51J receiver line includes the original 51J; the 51J-2; the 51J-3, known to the military as the R-388, with slight modifications; and the final model, the 51J-4, which is identical to the 51J-3 except for the addition of 3 selectable mechanical filters. A paragon of stability, the receiver is much prized by RTTY operators, laboratories, and SWL's with a yen for reading out frequencies to 1 kilocycle. A product detector can be added, as described in CQ Magazine articles; but the sensitivity does not seem to compare with the usual run of ham receivers. We have received the following suggested tube substitutions from Chuck Albertoni, K8JBE, of Sufield, Ohio. All of these were made for optimum gain without changing other components than the tube.

Substitutions are as follows in tube function, change to order: V-101 6AK5, R.F. Amp., 6CY5; V-102 6BE6, 1st Mixer, 6CS6; V-106 6BE6, 2nd Mixer, 6CS6; V-108 6BA6, 2nd I.F. Amp., 6BZ6; V-109 6BA6, 3rd I.F. Amp., 6HS6; V-110 5V4 Rectifier, Plug-in silicon diodes.

(If Mechanical Filter Adapter M-354 is installed:) V-301, 1st I.F. Amp, 6CY5; V-302, 2nd I.D. Amp, 6DK6.

Chuck notes that his S-meter was going off scale, so he shunted it with a 70 ohm resistor. While this would no doubt cause Collins purists to become violently ill, the suggested changes indicate an interesting experiment, with no more ability required than to make tube substitutions - and possibly realign to peak output as necessary.

(From DABA Bulletin-W8MGQ Ed.)

The best things in life are free. It's the worst things that are so expensive.

-Changing Times

diode because this myriad of beats is a bit annoying and when a local ham or other strong adjacent signal comes on it gets worse. With a bit of tinkering you will be surprised with what can be done.

Onyx

HAMBAR

HAMBAR services of radio equipment ONLY will be available to all our subscribers, amateurs or non-amateur, at a donation rate of 25¢ or more for ten (10) lines and 5¢ a word thereafter. There are approximately seven words to a line. Space permits only one ad per month please.

Non-subscribers rate is \$1.00 for ten lines and 5¢ each additional word.

To Commercial Business: Classified, undisplayed — 50¢ per line; Illustrative or General Display with border — \$3.50 min., \$60/page; Initial cost of cuts, additional. Cuts furnished, no charge. Deadline 10th of month.

An Advertising inch is measured 7/8" vertically on one column, i.e., 4 columns—40 column inches to a page. Rate card by column inch supplied upon request. FLORIDA SKIP, Advertising Department, P. O. Box 501, Miami Springs, Fla. 33166.

AMATEUR — WHOLESALE ELECTRONICS, (Div. of International Electronic Systems, Inc.), 280 Aragon Avenue, Coral Gables, Florida 33134. Franchised distributor for Collins, Galaxy, Swan, BTI, Hy-Gain, Ameco, EZ-Way, etc. Write for current used equipment list. No one anywhere will beat our price. Have a better offer? We will top it! We trade and we service what we sell. Come in and see us. Phone 305-444-6206. See our ad every Sunday in the Miami Herald, Column II-08. (Paid adv.)

BACK ISSUES OF FLORIDA SKIP. First come, first serv. Full 12 issues \$3.00. Individual copies 20¢ postpaid. Write Florida Skip, Box 501, Miami Springs, Fla. 33166. Specify year and/or months needed.

FOR SALE: 15 meter beam with 50 ft. new RG8u. \$16.00. Hammarlund HK-1B Keyer \$30.00 less 22 V. battery. EL-KEY for HK-1B \$12.00. A. Clark W4IYT, 41 Lenape Dr. Miami Springs Fla. 33166. Phone 888-3874.

FOR SALE: Heath SB-100 with HP-23 power supp. \$350.00; 5 watt 10 M xcvr with 12V PS and Hustler mobile ant. \$35.00; Apache \$65.00; TV camera on circuit board with Vidicon, all coils, PS, lens, cabinets, etc. \$150.00; Headphones \$12.00; KW transmatch \$15.00; SX-140 rx with headphones \$80.00; DX-60A with relay, and key \$55.00; HD-10 VFO \$25.00; EV-727 mike \$5.00; 5 watt 10 M xcvr with mobile supply and mike \$35.00; Pop Tronics Tesla coil \$10.00; Dow Key relay \$6.00; superhet walkie talkie \$12.00; 50 ft RG8?U \$3.00; 30 ft. mast \$5.00; Surplus transmatch \$2.00; Knight C-100 walkie talkie with 10 mtr xtal \$4.00; TV camera circuit board complete with PS, Bouch & Lomb lens, cabinet, all parts, needs only vidicon and focus/deflection coils, \$40.00; Knight R-100A receiver with deluxe spkr \$40.00; 2-RCA AP1A CRT's with pwr xfmr, cost \$18.00 each, bargain at \$5.00 each, both new; RCA image orthicon #5820 costs \$1000.00, bargain at \$50.00; 100 new 1/2, 1, and 2 watt 5% resistors, \$5.00; breadboard cost \$38.00, only \$10.00; Mosley V-3 \$15.00. Terry Windmiller WA4YSG, 752 NE 128 St., North Miami, Fla. 33161 Tel. 759-0451.

FOR SALE: NOVICE AND TECHNICIAN GEAR: HT-40 with 2-15 meter xtals, needs minor repairs, \$25.00; Heath twoer like brand new, used less than 20 hours \$40.00; Ameco Nuvistor converters models CN-50, good condition, IF 7-11 mhz \$20.00; CN-144 excellent condx, like new, IF 28-32 mhz \$30.00; homebrew 16-element collinear beam for 2 meters \$5.00; Paul Alberts, 9030 S.W. 64th St., Miami, Fla. 33143, Tel. 271-5231.

FOR SALE: Johnson Viking II, clean with manual \$60.00. Johnson VFO Mod. 221 \$15.00. Heath Q Multiplier QF-1 \$7.00. Heath Balun coils B-1 \$5.00. Knight R-55A with manual \$27.00. Mastercrafter Ham Shack clock with timer \$7.00. All equipment very clean and working. Andy Clark W4IYT, 41 Lenape Dr., Miami Springs, Fla. 33166. Phone 888-3874.

FOR SALE: HiGain #18 HT HI Tower vert antenna \$85.00. Heath HD-15 phone patch \$15.00. Knight 5 inch broad band general purpose scope \$22.50. WANTED HAM — M roter. George Reaves, 118 N. Lakeview St., Winter Garden, FL 32787.

OLD OLD TUBES: 30, 33, 36, 38, 42, 44, 45, 76, 77, 78 also UY-224, UX-226, UY-227, UX-230, CX-301-A, C-324, C-327, C-347. These are RCA Radiotrons, Fada, Philco, Majestic and Cunninghams, also a Hytron and an outfit called CeCo. Most are still in working condition — which is more than you can say for the original owners. Prices?? Whatever is a fair. Reid Martin, W4VDY, Rte. 1, Box 134-B, Tavares, Fla.

FEW LEFT: FLORIDA SKIP still has a few 1968 calendars left for our SKIP subscribers. Send a self-addressed-stamp-envelope (6 cents that is) to: SKIP Calendar, Box 501, Miami Springs, Fla. 33166.

FOR SALE SX-117 with 100 mHz calibrator, WWV xtal-10 mtr xtals, Handbook 6 meter Nuvistor converter \$180.00. E. G. Schroeder, 105 NE 19th Ave., Deerfield Beach, Fla. Apt. 362-D Phone 339-7469.

FOR SALE: Heathkit SB-400 SSB transmitter \$225.00. Will demonstrate on air by sked. H. Herbert Combs, W4KEB, Star Rte., Jensen Beach, FL 33457. Phone 287-6617.

Time is something you should use — not kill or save.

FOR SALE: VHF-I Heath Seneca transmitter \$75.00. NC-270 national receiver \$75.00. Mel Brooks K4M-ZH, 8516 SW 15th Ct., Ft. Lauderdale, Fla. Phone 581-4199

FOR SALE: 75S1 Collins receiver with Waters rejection tuning in excellent condition. Frank Holt, K4YWX Phone Miami 758-5962 or write c/o Box 9175, Ft. Lauderdale, Fla. 33310, Phone 583-3344.

FOR SALE: 14AVQ trapped vertical 10 to 40 meters automatic band selection, late model with manual A-1, bargain \$12.00. Walt Stock W4-IIS, 117 NW 100th St., Miami Shores, Fla. 33150. Phone PL 4-2995.

FOR SALE: Collins 75S1, serial 1314 with Waters "Q" Multiplier \$275.00. Frank J. Holt K4YWX, 94 N.E. 96th St., Miami, Fla. 33138. Phone 305-758-5962.

FOR SALE: Original owner, Collins 75A3 with 3.1 kc filter, call, and speaker \$210.00. Hallicrafters HT-32 with new 6146's, \$165. Vibroplex Original \$15.00. Mosley 'vest-pocket' 20 meter 3 element beam \$25.00 all in excellent electrical and physical condition. No modifications. Dan Zerick, 4116 Roosevelt St., Hollywood, Fla. Phone 987-4911.

FOR SALE: HALLCRAFTERS SX-28 with manual works good, clean \$30.00. Heath Q-multiplier \$6.00. RME VHF 152-, 2, 6, and 10 meters converter \$15.00. Dick Moody K4-AUD, 5415 Columbus Rd., West Palm Beach, Fla. 33405. Phone 585-2183.

Government can give you nothing without first taking it away from you.

WANTED: Electronic Keyer, HD-10. Bill Kargoll, K4EQ, Route 1, Box 250, Jupiter, Fla. 33458.

WANTED: SW-3 with 80 and/or 40 meter coils. A. Clark W4IYT, 41 Lenape Dr., Miami Springs, Fla. 33166. Phone 888-3874.

FOR SALE: HW-12A and d.c. power supply \$140.00. DX-100B \$65.00 SW-AN d.c. module \$40.00. Linear 1500 PEP 4-811A GG \$80.00. Four new 572B's \$55.00. Webster mobile band spanner \$15.00. C.C. Fowkes WB4B-OM, 200 SW 18th St., Pompano Beach, Fla. 33060. Phone 933-2076.

WILL TRADE: DX-35 Heath Twoer with feedline and 7 element yagi, BC-456Q receiver and ?? all for FB condition Collins 75A4 receiver. V. L. Peterson WN4GQU, 3502 North 9th Ave., Pensacola, Fla. 32503.

SOLID STATE OF THE ART

(Continued from Page 2)

more free electrons the better the conductivity value. Materials which are known to be excellent conductors are Silver, Copper and Aluminum. Materials with very few free electrons are classed as insulators such as Mica, Glass and Rubber. SEMI-CONDUCTOR materials like in the range between these two material types, because they both oppose and condone the passing of current and thus the name, SEMI.

During the preparation of materials for manufacture, foreign metallic materials called IMPURITIES are introduced and mixed with the crystals and are used as control agents. The ratio of impurities to SEMI-CONDUCTOR materials is very minute. Among impurity elements which are added to GERMANIUM and SILICON are Arsenic, Antimony (which is a white metallic alloy widely used in drugs) and Phosphorus. With the addition of these elements the SEMI-CONDUCTOR materials become known as an N-type because it will contain an excess of free electrons with a negative tendency.

When such agents as Indium (a rare element containing zink), Gallium and Aluminum are mixed with the crystals, the SEMI-CONDUCTORS will be known as P-types due to the lack of an electron balance which will tend to the positive side. Note here that the charge whether negative or positive is always in balance by an equal charge within the core of the atom, so that the total charge of the SEMI-CONDUCTOR is not in fact changed at all but merely possesses a tendency toward one or the other. The chemical composition of both N and P types is very small but the electrical difference is large enough to effect the operation of the device.

N-TYPES

N/type materials are those which possess an excess of electrons. Electrons as we know are negatively charged and there-

(Continued on Page 16)

NEW HAM RADIO MAGAZINE

There is a new magazine called 'HAM RADIO.' It's supposed to be different. According to the publisher, it's supposed to be easier to read, understand, build from, and easy to like.

For a FREE COPY write to: Ham Radio Magazine, Greenville, New Hampshire 03048.

You can also get the Free Copy and 4 month trial offer for \$1.00. Send your address and Zip Code before March 31, 1968. It's feature writer is Jim Fisk, WIDTY.

One of the computer manufacturers recently stated that they have advanced their reliability of their magnetic drum 100 times in the past year. They claim to have achieved one bit error in 100,000,000,000.

I wish some of those brains would take a minute out and devise a system for these monsters called electronic keyers so that we could eliminate some of the garbage we hear on CW.

-ONYX

SOLID STATE OF THE ART

(Continued from Page 15)

fore the N indicates negative tendencies. These excess electron (s) usually come from impurities implanted within the crystal. Impurities which supply electrons are known as DONOR impurities. The donor atom is locked in place atomically as well as mechanically. Because of the difference in atomic weights or numbers the donor contains an excess of electrons when compared to Germanium or Silicon atoms. These excess atoms cannot form a bond with the electrons in the crystal material because there are too many of them. Therefore these excess electrons become free electrons. When the donor material loses one or more of its free electrons the electrical charge becomes unbalanced which causes it to ionize and the donor atom is now said to be a positive ion.

Since imperfections exist in the crystal, holes or the lack of electrons will exist and because the electrons outnumber the holes, the crystal will remain negative in nature and will thusly be called an N-type material. Because of the holes left by the movement of free electrons a minute chain reaction is started which is the basis for electrical conduction. When an electron moves it leaves a hole which is filled by another free electron which in turn leaves a hole . . . and so on. Movement of free electrons is not the only source of conductivity but we will go into this later on. Electrons in this case being the majority will be called the majority carriers and the holes naturally the minority carriers.

P-TYPES

In the case of the P-type material, the introduced impurity agent contains a smaller atomic count than the crystal. Again since all atomic electrons will pair or bond with their neighbor in the adjacent atomic structure, this smaller number of the impurity will not contain enough electrons to complete a covalent bond and will therefore leave holes or spaces within its structure. It will show positive tendencies and as such will accept a stray electron from any source in order to complete the bonding. As with the donor atom, it too, is locked in place. By gaining an electron from another atom it will upset the balance charge again, causing ionization and thus the impurity causes a positive balance to be prevalent. This type of impurity atom is known as an ACCEPTOR impurity. Since a hole (s) have been caused elsewhere in the crystal, positive holes predominate and the material is called a P-type; P of course, meaning positive in nature. In the P-type materials, holes will be the majority carriers and the electrons in the minority.

In summarizing, Solid State conduction can take place by the free movement of charged carriers known as holes or electrons. These holes or electrons can originate from the impurity elements within the atom or the crystal or from heat, chemical or pressure changes. During the manufacture of a crystal, conductivity control can be made possible by making either N or P type materials. Thermal control; conduction due to effects of heat; cannot be controlled in manufacturing or anything that might be added to the crystal, but can be controlled to a degree by temperature variation when in use.

There are so many different types and versions of SEMI-CONDUCTORS at present that it is becoming increasingly more difficult to categorize or list them by specific types. We shall not take in every type and kind that are made, but will attempt to learn about a few of the more common ones that might fall to use by the Amateur or experimenter. The advancement of the Solid State industry is so fast now that they the time the next chapter is written and in print, it may very well be obsolete. However, much of what an Amateur might be inclined to use has been and will continue to be around for a long time to come.

CHAPTER 4

THE VARIOUS TYPES OF SEMI-CONDUCTORS

A new column started in the March issue, TO-5 and SMALLER by Tom Debray, K4KRJ. If you are keeping up with this one you should keep up with TO-5 also as the two should be quite comparable.

16/FLORIDA SKIP April 1968



DEDICATION OF THE NEW Gulf County Civil Defense EOC, Feb. 23, Governor Kirk and the following amateurs present: Bob Jackson K4RZF, Gulf Co. EC, who installed most of the equipment at the Court House, W4MXN, K4LQQ, W4WEB, K4YSO, W4RKH, W4IKB, W4AEVU and W4AWU. The new EOC is all set for RTTY, CW, SSB on all bands 2 thru 80 meters. Assisting with communications (on the other end) during the dedication were: W4NRP, Panama City; W4DXX, Tallahassee and W4ZFK at Chipley. Congratulations to all hands. (Photo by W4IKB)

Southeastern Division Survey

(Editor's Note: Following are some facts and figures released by our SE Div. ARRL Director, Charles J. Bolvin, W4LVV. Chuck says the questionnaire was sent to roughly 4500 members and approximately 2000 members returned completed forms. 1240 of these were coded and the information was transferred to IBM cards. The job was done by W4's BYB, DTJ, EDP, HOS, LGP, LVV and K4's JWM, KJA plus W4BAL after many, many long hours of work.)

DISTRIBUTION: Florida 61.7 Georgia 20.3, Alabama 14.5, Puerto Rico 2.6, Canal Zone 0.7 and Virgin Is. 0.15.

DISTRIBUTION By License: Novice 1.9, Tech 6.5, General 45.0, Advanced 27.4, Extra 6.9, and Conditional 12.3.

OM's 97.7, **YL/XYL's** 2.3, **Club members** 39.5 and **Non Club** 60.5.

Age groups: under 20 - 6.2, 20 to 40 - 27.0, 40 to 60 - 47.6, over 60 - 19.4 and no answer 0.7.

EDUCATION: Less than eight year 1.4, more than eight, less than 12 - 13.9, more than 12 - 44.5, college graduate 38.8 and no answer 1.4.

90 percent have a station on the air. Of the 10 percent who do not have a station on the air, 58 percent have a full station which, for various reasons, they cannot get on the air at the present time (apartment restric-

tions, just moved or about to move, in military and away from home, etc.)

EQUIPMENT: 89 percent own a "factory built" transmitter, receiver or transceiver. 29 percent own a "home brewed" TX, RX or Transceiver.

39 percent own a TX, RX or transceiver which they built from a kit.

MODE: More than half of the time on air: CW 24.5, SSB 37.5, AM 13.5, RTTY 1.5, 50/50 cw/-phone 7.0 and no answer 16.0.

CAPABILITY BY BANDS: CW 160-7.7, 80-60.5, 40-66.8, 20-66.1, 15-63.6, 10-55.3, 6-9.8, 2-21.6 and other VHF 2.5.

PURCHASING HABITS: 88 percent made what they considered a major purchase within the last seven years. 32 percent made this purchase in 1967, 27 percent in 1966 and 17 percent in 1965. 73 percent bought new items and 27 percent bought used equipment, in the major purchase category.

Due to the length of the Survey we must end it here. We hope the above figures prove interesting. Our sincere thanks again to Chuck W4LVV and his crew on an outstanding job. These figures will be turned in at the next ARRL Board meeting this May. A condensed version will appear in W4LVV's Division Newsletter which is due out in March.